

IN THE CLAIMS

Please amend the claims as follows:

1. Polycrystalline alumina components with an additive of at least 0.001 wt-% ZrO_2 and optionally containing MgO in a concentration of at most 0.3 wt-% characterized in that the alumina contains at most 0.5 wt-% ZrO_2 as an additive and has an average crystal size $\leq 2 \mu\text{m}$, and a relative density higher than 99.95 % with a real in-line transmission RIT $\geq 30 \%$ measured over an angular aperture of at most 0.5° at a sample thickness of 0.8 mm and with a monochromatic wavelength of light λ .
2. Polycrystalline alumina components according to claim 1, characterized in that the average crystal size is $\leq 1 \mu\text{m}$ and the real in-line transmission RIT is at least 40 %.
3. Polycrystalline alumina components according to claim 1 ~~or 2~~, characterized in that the ZrO_2 additive is in a concentration from 0.1 wt-% to 0.3 wt-%, inclusive.
4. Discharge lamp characterized in that the lamp is provided with a discharge tube having a wall of a ceramic as claimed in ~~any one of the preceding claims~~ claim 1.

5. Lamp according to claim 4 characterized in that the discharge tube has an ionisable filling containing a metal halide.

6. Method for forming a polycrystalline alumina component as claimed in ~~any one of the preceding claims~~claim 1 characterized in that the process includes the steps of

- preparing a slurry of corundum power with a mean grain size $\leq 0.2 \mu\text{m}$,
- adding a dopant, selected from zirconia and a zirconium containing precursor,
- casting the slurry in a mould,
- drying and sintering of the moulded body thus formed, and
- performing a HIP treatment at a temperature of at least 1150°C for at least 2 hours.

7. Method according to claim 6, wherein the dopant is added as finely grained ZrO_2 .

8. Method according to claim ~~6 or 7~~, wherein the finely grained ZrO_2 dopant has an average particle size of at most 100 nm.

9. Method according to claim 6,~~7~~~~or~~~~8~~, wherein after the addition of the zirconia dopant the prepared slurry is slip cast in a mould.

10. Method according to claim 6,~~7~~~~or~~~~8~~, wherein after the addition of the zirconia dopant the prepared slurry is gel cast in a mould.